

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A method for improving blast resistance of a structure, comprising:

spraying a layer of an elastomeric material to form a blast resistant panel of a predetermined thickness in the range of about 100 mil to about 250 mil; and

once cured, securing said blast resistant panel to a surface of said structure so that the blast resistant panel extends from at least two opposing edges of the surface of said structure.

2. (original) A method as set forth in Claim 1, wherein said elastomeric material is selected from the group consisting of polyurea, polysiloxane; polyurethane, and a polyurea/polyurethane hybrid.

3. (previously presented) A method as set forth in Claim 1, wherein said elastomeric material is a polyurea material.

4. (previously presented) A method as set forth in Claim 2, wherein said elastomeric material has a percent elongation at break in a range of about 100-800%, and has a tensile strength greater than about 2000 psi.

5. (original) A method as set forth in Claim 4, wherein said elastomeric material has a percent elongation of break in a range of about 400-800%.

6. (previously presented) A method as set forth in Claim 1, wherein said panel is flexible.

7. (original) A method as set forth in Claim 6, wherein said elastomeric material is selected from the group consisting of polyurea, polysiloxane; polyurethane, and a polyurea/polyurethane hybrid.

8. (previously presented) A method as set forth in Claim 6, wherein said elastomeric material is a polyurea material.

9. (original) A method as set forth in Claim 7, wherein said elastomeric material has an percent elongation at break in a range of about 100-800%, and has a tensile strength greater than about 2000 psi.

10. (original) A method as set forth in Claim 9, wherein said elastomeric material has a percent elongation of break in a range of about 400-800%.

11. (previously presented) A method as set forth in Claim 6, wherein spraying said layer of said elastomeric material further comprises spraying said elastomeric material onto a fabric reinforcement layer.

12. (previously presented) A method as set forth in Claim 1, wherein spraying said layer of said elastomeric material comprises spraying said layer directly onto a molding surface.

13. (previously presented) A method as set forth in Claim 1, wherein spraying said layer of said elastomeric material comprises positioning a fabric reinforcement layer

on a molding surface; and spraying said elastomeric material onto said fabric reinforcement layer on said molding surface.

14. (previously presented) A blast-resistant panel, comprising:

a cured layer of a sprayed elastomeric material having a predetermined thickness in the range of about 100 mil to about 250 mil, and

fastener elements for securing said cured layer to a surface of a structure so that the cured layer extends from at least two opposing edges of the surface of said structure.

15. (previously presented) A blast-resistant panel as set forth in Claim 14, wherein the elastomeric material is a material selected from the group consisting of polyurea; polysiloxane; polyurethane, and a polyurea/polyurethane hybrid.

16. (previously presented) A blast-resistant panel as set forth in Claim 14, wherein said elastomeric material is polyurea.

17. (original) A blast-resistant panel as set forth in Claim 14, further comprising a channel member secured to said panel around at least a portion of a periphery thereof.

18. (canceled)

19. (previously presented) A blast-resistant panel as set forth in Claim 14, wherein the blast resistant panel has a thickness of about 180 mil.

20. (original) A blast-resistant panel as set forth in Claim 14, wherein said elastomeric material has a percent elongation at break in a range of about 100-800%.

21. (original) A blast-resistant panel as set forth in Claim 20, wherein said elastomeric material has a percent elongation at break in a range of about 400-800%.

22. (original) A blast-resistant panel as set forth in Claim 20, wherein said elastomeric material has a tensile strength greater than about 2000 psi.

23. (original) A blast-resistant panel as set forth in Claim 14, wherein said panel further comprises a fabric reinforcing layer.

24. (original) A blast-resistant panel as set forth in Claim 16, wherein said panel further comprises a fabric reinforcing layer.

25. (original) A blast-resistant panel as set forth in Claim 24, wherein said fabric reinforcing layer is constructed of aramid fibers.

26. (original) A blast-resistant panel as set forth in Claim 24, wherein said fabric reinforcing layer is constructed of polyester fibers.

27. (previously presented) A system for improving the blast resistance of a structure, comprising:

one or more flexible, blast-resistant panels having a predetermined thickness in a range between about 100 mil and 250 mil and constructed of an elastomeric material sprayed onto a fabric reinforcing layer,

said one or more flexible, blast-resistant panels having a steel channel fastened around a periphery thereof; and

a plurality of fasteners adapted to fasten said steel channel and said one or more flexible, blast-resistant panels to a wall of said structure so as to cover the wall of the structure with said one or more flexible, blast-resistant panels.

28. (previously presented) The system of claim 27 wherein said steel channel comprises:

a pair of opposing sides depending from opposite ends of a bottom portion to form a substantially “U” shaped channel.

29. (previously presented) The system of claim 27 wherein said steel channel comprises:

a “U” shaped steel channel along a top portion, a bottom portion, and a first side portion of the periphery; and

a “Z” shaped steel channel along a second side portion of the periphery opposite of the first side portion and between the top and bottom side portions, said “Z” shaped steel channel to be fastened to a first and a second of said one or more flexible, blast-resistant panels.

30. (previously presented) A system for improving penetration resistance of a structure, the system comprising:

a flexible, blast-resistant panel of a sprayed elastomeric material having a predetermined thickness in the range of about 100 mil to about 250 mil;

a channel attached around a periphery of the flexible, blast-resistant panel;
and

a plurality of fasteners to fasten said channel to a surface of a structure, the flexible, blast-resistant panel sized to extend across and cover an area between opposing sides of the surface of the structure.

31. (previously presented) The system of claim 30 wherein said flexible, blast-resistant panel comprises a fabric reinforcing layer.

32. (previously presented) The system of claim 31 wherein said fabric reinforcing layer is embedded in the elastomeric material.

33. (previously presented) The system of claim 31 wherein said fabric reinforcing layer is constructed of at least one of aramid, polyester, yarns, and fibers.

34. (previously presented) The system of claim 31 wherein said fabric reinforcing layer comprises an open grid pattern.

35. (previously presented) The system of claim 31 wherein said channel is adapted to be fastened to an interior surface of said structure.

36. (canceled)

37. (previously presented) The system of claim 30 wherein said flexible, blast-resistant panel contains shrapnel between the elastomeric panel and the surface of the structure.

38. (previously presented) The system of claim 30 wherein said flexible, blast-resistant panel comprises an elastomeric material with a percent elongation at break in a range of about 100-800%.

39. (previously presented) The system of claim 38 wherein said elastomeric material has a percent elongation at break in a range of about 400-800%.

40. (previously presented) The system of claim 38 wherein said elastomeric material has a tensile strength greater than about 2000 psi.

41. (previously presented) The system of claim 38 wherein said elastomeric material is a material selected from the group consisting of polyurea; polysiloxane; polyurethane, and a polyurea/polyurethane hybrid.

42-51. (canceled)

52. (previously presented) A blast and penetration resistant system comprising:
a cured, blast-resistant panel of a sprayed elastomeric material having a fabric reinforced layer embedded therein, the cured, blast-resistant panel having a predetermined thickness between about 100 mil and about 250 mil, a percent elongation at break in a range of about 400-800% and a tensile strength of about 2000 psi or greater, the fabric reinforcing layer being substantially planar and including warp and fill yarns defining an open grid pattern with openings of up to about 0.5 inches by 0.25 inches and a tensile strength of about 1200 psi by 1200 psi; and

a steel channel subsystem configured to be attached around a periphery of the cured panel and the steel channel subsystem and the periphery of the cured panel fastenable to a surface.

53. (previously presented) The blast and penetration resistant system of claim 52 further comprising:

fastener elements to pass through the steel channel subsystem and the periphery of the cured, blast-resistant panel and secure the steel channel subsystem and the periphery of the cured, blast-resistant panel to the surface.

54. (previously presented) The penetration resistant panel of claim 52 wherein the elastomeric material is a material selected from the group consisting of polyurea; polysiloxane; polyurethane, and a polyurea/polyurethane hybrid.

55. (previously presented) The penetration resistant panel of claim 52 wherein the steel channel subsystem comprises a “U”-shaped steel channel.

56. (new) A method for improving blast resistance of a structure, comprising:
spraying a layer of an elastomeric material to form a blast resistant panel of a predetermined thickness in the range of about 100 mil to about 250 mil; and
once cured, securing said blast resistant panel to a wall in a room of said structure so that the blast resistant panel extends from at least two opposing edges of the wall of said structure, such that the blast resistant panel operates to prevent shrapnel from entering the room after the wall is subjected to an explosion.

57. (new) A system for improving penetration resistance of a structure, the system comprising:

a flexible, blast-resistant panel of a sprayed elastomeric material having a predetermined thickness in the range of about 100 mil to about 250 mil;

a channel attached around a periphery of the flexible, blast-resistant panel;
and

a plurality of fasteners to fasten said channel to a wall of a structure, the flexible, blast-resistant panel sized to extend across and cover an area between opposing sides of the wall of the structure, the flexible, blast-resistant panel adapted to prevent shrapnel from entering the room after the wall is subjected to an explosion.